

CDM

environmental engineers, scientists,
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August 11, 1986

Mr. John Cochran
Regional Project Manager
U.S. Environmental Protection Agency
Region VI
1201 Elm Street
Dallas, TX 75270

RE: South Cavalcade Street Site

Doc. Ctrl. No.: 143-TS1-EP-DCPG-1

Dear John:

Attached is a memo to me from Rich Petrus conveying his comparison between field notes made by McBride Ratcliff Associates (MRA) personnel and CDM personnel performing compliance monitoring at the South Cavalcade Street Site. The comparison was made at your request. The comparison was for the period from January 20 through May 30, 1986. I asked Rich to perform the comparison because he is very knowledgeable about field procedures and is not directly connected to any of the work performed by CDM at the South Cavalcade Street Site. The procedure used in the comparison is described in Rich's memo.

Rich has concluded that there are no major differences, most being attributable to individual interpretations. MRA performed headspace in the field approximately fifteen to twenty minutes after the samples were placed in jars; these are the headspace readings CDM recorded except when CDM had their own meter, then the values from that meter were recorded. A second headspace reading was taken in the lab. Since the field notes were recopied, perhaps only the second, "lab" headspace is recorded; this would explain some of the differences between the CDM and MRA readings. Furthermore, MRA rounded the readings from their meter up to the nearest half or whole number. Initially, CDM was recording the actual values, but used MRA's method later to avoid confusion. With respect to CDM's lack of notation of samples used for surrogate analysis, it is my understanding that MRA did not select samples for surrogate analysis in the field, but only after performing the second headspace analysis in the laboratory.

Where CDM's notes are contradictory, this will be remedied, if possible. Remedies will be noted in the fieldbook, dated, and initialed.

If you have any questions, please do not hesitate to contact me.

Sincerely,
CAMP DRESSER & MCKEE INC.

Robert S. Kier
Robert S. Kier
Site Manager

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MEMORANDUM

TO: Robert S. Kier - CDM/Austin
FROM: Richard T. Petrus - CDM/Dallas *RP*
SUBJECT: Comparison of Field Logs
South Cavalcade Site
PROJECT NUMBER: 7777-143-TS1-SIEVL
DOCUMENT CONTROL NO: 143-TS1-IO-DBWW-1
DATE: August 5, 1986

As per your request, I have conducted a comparison of field notes and logs for the South Cavalcade site. The period covered was from January 20 through May 30, 1986.

The procedure used consisted of comparing CDM's notes for the time we were in the field to McBride-Ratcliff Associate's (MRA) daily logs and notes for the same period. I concentrated my review on sample location, HNU readings, number of samples and total depths. To a lesser detail, I compared soil classification, health and safety notations and times of activities.

My review is divided into two sections. The first contains general comments about the review. More specific comments which cite specific examples of the general comments are found in the second section.

General Comments

The comparison of the two firms indicated no major difference in the technical notes. The differences between the two firms can, in large part, be minor and can be attributed to expected variations between individuals geologists/engineers.

For example, a soil type may be classified by visual analysis as a silty sand by one geologist and a clayey sand by another. I do not feel that these differences are significant for this investigation. Sara Landtiser used a USCS-type classification while Mike Young used a USDA-type classification. Again, no significant problem.

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I did note that water levels and moisture contents in borings were typically unrecorded by MRA. Mike also did not always record this information. Sara typically recorded moisture contents. Mike always recorded NHU readings, however, Sara infrequently recorded these values.

Duplicate and CLP samples were not typically recorded in MRA's drill or daily logs. CDM also typically did not record surrogate samples. This may be because we were unaware of MRA's scope of work at the time.

As you have informed John Cochran, there have been numerous times when standard health and safety procedures were not followed by MRA. CDM noted these problems, made suggestions to MRA in the field, and documented the suggestions in our logs. MRA's logs infrequently record these discussions.

There typically was a difference between recorded times of activities. For example, drilling may have been recorded as commencing at 0830 hours by one firm and 0900 hours by the other. Again, this is probably an insignificant finding.

One observation of MRA's well or piezometer completion logs needs to be pointed out. From the information on the completion forms, it is not possible to determine the exact length of screen placed in the boring. The bottom of the screen is identified, in addition to the top of the sand pack, however, the exact top of screen is not on the form. This information is necessary if in-situ permeability tests are performed. This information is also needed should vertical gradients for adjacent wells/piezometers be calculated.

MRA has caveated their logs and notes with preliminary stamps. They may change these forms at a later date. This review, of course, is based on the material originally supplied by MRA and does not encompass later changes.

Specific Comments

1/20 - 1/24 SCK-A07-005 - MRA noted no visible contamination and did not record NHU readings. CDM found visual contamination and found contaminated groundwater. CDM noted 2 samples were collected. MRA noted only 1. Total depths also differed (CDM = 8 feet; MRA = 5 feet).

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- 1/20 - 1/24 (Cont'd) SCK-A06-AB1 - Could not find MRA log.
SCK-A11-AB2 - CDM recorded sample location of 4 feet, MRA recorded 2 feet.
SCK-A11-AB03 - CDM recorded sample location of 8 feet, MRA recorded 4 feet.
- 1/20 - 1/24 SCK-A16-AB2 - CDM recorded a sample was collected. MRA logs initially note a sample was taken. However, the sample was later crossed out. The status of this sample cannot be determined by MRA and CDM logs.
- 1/27 - 1/31 No significant differences recorded this period.
- 2/3 - 2/7 SCK-A01-06 - CDM reported a T.D. of 8 feet, MRA reported 7 feet.
SCK-A25-AB2 - CDM did not record water in this hole, however, MRA found water at 7.4 feet.
SCK-A4-AB1 - CDM reported the sample was collected at 7 feet, MRA reported 8 feet.
- 2/10 - 2/14 No major differences this reporting period.
- 2/18 - 2/22 On boring SCK-A01-SB01 - There were no HNU readings recorded below 20 feet, however, creosote odors were noted by CDM and MRA.
Remainder of logs show no significant difference between MRA and CDM.
- 2/24 - 2/28 SCK-A01-SB-04 - CDM did not get headspace on SCK-A01-SB04-23. MRA logs have a value of 1.5 ppm.
SCK-A01-SB05 - Hole was abandoned because of something in subsurface at 2 feet. No notes in MRA logs on this change. Hole was redrilled on 3/10/86.
SCK-A04-SB01 - CDM was told samples were collected for permeability testing, however, MRA logs or field notes give no indication of testing.

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3/3 - 3/7

SCK-A02-SB01 - There is confusion between CDM and MRA for samples 7 and 8 of this hole. The log of MRA indicates samples were collected, however, CDM records indicate they were discarded in a drum and were called cuttings.

SCK-A02-SB02 - The minimum detection recorded on this hole was 0.2 ppm by CDM, whereas MRA recorded 0.5 ppm. This is not a major discrepancy.

On this hole CDM suggested drilling employees use safety glasses. CDM was informed that driller didn't know where they were at. The conversation was not recorded in MRA log books.

SCK-A04-SB01 - No reason for augering through 7 feet of unrecorded materials was provided in MRA logs. CDM explained in their logs that flowing sands in this interval made continuous sampling difficult.

CDM noted that Mr. Urban walked off site without deconning. No mention of this was provided in MRA logs.

SCK-A04-SB02 - CDM was told a permeability test sample was collected at 56-58 feet. This is not noted in MRA logs.

At this hole, CDM suggested changing decon procedure to eliminate cleaning on the trailer bed and to use saw horses instead. Augers and other tools were not getting clean with existing method. There was no notation in MRA logs of this change.

On this hole, as was the case on many holes, duplicate samples were not noted. CDM noted duplicates of SCK-A04-SB03-11, MRA didn't.

Slight differences in headspace at 51.5 feet. CDM noted 2.5, MRA noted 3.0 ppm.

3/10 - 3/14

SCK-A01-SB05 - CLP split sample not noted by MRA.

SCK-A01-SB06 - MRA noted possible sewer contamination in this hole. CDM showed nothing in their records.

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- 3/17 - 3/21 SCK-A04-SB06 - Duplicate sample of 65 feet not noted by MRA.
- Remainder of the week's logs and notes were consistent.
- 3/24 - 3/28 The logs and notes closely corresponded this week. No CLP or duplicate samples were missed by MRA. However, suggestions to MRA regarding decon methods were not noted in MRA logs.
- 3/31 - 4/4 SCK-A26-SB01 - No HNU readings on samples 1 through 15 were recorded on CDM logs as no field headspace analysis was performed while CDM was present. However, MRA logs have headspace analysis. When analysis was done is not apparent from field notes.
- SCK-A27-SB01 - Differences were noted in depth of hole. MRA recorded 60', CDM recorded 58'.
- 4/7 - 4/14 HNU readings were typically not recorded by CDM. CDM's logs on SCK-A13-SB01 indicate sample 23 was collected at 53.5 and 59.5 feet. This should be fixed.
- 4/14 - 4/18 SCK-A14-SB02 - CDM's summary report indicates 30 samples were collected while CDM's daily logs concur with MRA (31 samples).
- SCK-A14-SB03 - CDM didn't note the samples for surrogate analysis. MRA did not record sample retained for permeability test.
- SCK-A10-SB01 - No HNU readings were recorded by CDM or MRA.
- SCK-A10-SB02 - CDM was not on site to see the remainder of this hole. The reported T.D. by MRA was 75 feet. CDM's last recorded depth was 44 feet.
- 4/21 - 4/25 No significant differences noted this drilling period.
- 4/28 - 5/2 SCK-A05-SB01 - HNU readings were not recorded by MRA on the last two samples in this borehole. CDM logs have 0.5 ppm for each sample.

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- 5/5 - 5/9 No significant differences this reporting period.
- 5/12 - 5/16 Missing SCK-A14-SB04, 05, and 06.
- SCK-A14-SB02 - Sample quantities differ. MRA indicates 31 samples, CDM indicates 32 plus duplicates.
- 5/19 - 5/23
- | | |
|--------------------------------------|------------|
| Discrepancy in depth of SCK-A14-SB07 | CDM = 68 |
| Discrepancy in depth of SCK-A14-SB07 | MRA = 67.5 |
| Discrepancy in depth of SCK-A26-SB02 | CDM = 66 |
| Discrepancy in depth of SCK-A26-SB02 | MRA = 65.5 |
| Discrepancy in depth of SCK-A10-SB03 | CDM = 70 |
| Discrepancy in depth of SCK-A10-SB03 | CDM = 69 |
- SCK-F-01 - MRA indicates cement/bentonite backfill is from 0-30 feet in depth. CDM records 0-40 feet. There were many problems associated with backfill of this hole. None were recorded in MRA's logs.
- 5/28 - 5/29 No screen location (top) on well completion diagrams. I assume a 5' screen was used on P-04 and a 10' screen was used on P-05.
- Remaining comparison of geologic logs and measurements indicate no significant differences.
- CDM not onsite May 27 or May 30.

Bob, should you need additional information on this memorandum, please feel free to contact me.

RTP/saw

cc: Document Control

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